



TA-53 TOUR LOG

(Send completed form to MS H831)

Tour Date & Approximate Duration

LOCATIONS VISITED: (Check all applicable; list others not shown. Locations marked with an asterisk are potentially high radiation/contamination areas. Prior approval must be obtained according to Sections 5 & 6 of TA-53 Controlled Document 53 FIR 406-300-01.1 Visitor Tours at TA-53.)

Linac:

- ☐ Injectors - Sector J (MPF-3J)
- ☐ Beam tunnels (MPF-3 A-H; Line D*)
- ☐ Equipment rooms and aisles (MPF-3)
- ☐ Control Room (MPF-4)
- ☐ Switchyard*

Experimental Areas:

- ☐ Lujan Center, ER-1 (MPF-7)
- ☐ Lujan Center, ER-2 (MPF-30)
- ☐ WNR Blue Room* (MPF-7)
- ☐ Area A & A-East* (MPF-3M)
- ☐ Areas B & C* (MPF-3N & P)
- ☐ WNR South Yard
- ☐ Other area(s) with radiation or industrial hazards:

Proton Storage Ring:

- ☐ Ring Equipment Building* (MPF-28)
- ☐ Tunnel* (MPF-8)

Laboratories:

- ☐ AFEL/SPA (MPF-14)
- ☐ CRITS* at SNS-CCL (MPF-365)
- ☐ LEDA (MPF-365)
- ☐ ETL (MPF-2)
- ☐ Banshee (MPF-18)
- ☐ Structures Lab (MPF-17)

CHECK ONE:

- ☐ Based on the stated itinerary, I have determined tour participants are not likely to exceed a dose of 25 mrem, and radiation dosimetry is not required. I have informed tour participants of potential hazards that exist as per the Tour Briefing Card and made the *TA-53 Radiation Protection* pamphlet available upon participant request.
- ☐ Based on the stated itinerary, I have determined the possibility exists of a dosage greater than 25 mrem, and the requisite individual dosimeters have been issued.

Tour Guide Signature

Organization and Phone Number

List of Tour Participants

***If academic institution, please check appropriate box. Attach sheets as needed.**

Print Name	Signature	Institution	*
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Summary (for LANSCE Visitor Center use only)☐

Academia

☐

DOE Lab

☐

Industry

☐

Lujan

☐

Students

☐

US Gov't

☐

Other

LANSCCE Tour Briefing Card

Tour Guides: Please address the following topics with your tour group prior to conducting the tour.

TOUR RULES:

- Stay with tour guide at all times.
- Do not touch equipment unless cleared by guide or responsible person.
- Follow emergency instructions.
- If TLDs have been issued, return them at the end of the tour.
- Sign tour log.

HAZARDS at LANSCE: (for more specific information, contact the LANSCE Training Office)

Industrial

- Maintain a safe distance from forklifts and cranes.
- Personal protective equipment is required in certain areas (shops, construction areas, crane areas, high noise areas).
- Observe signs and barriers.

Radiation: Radiation is the collective term for the particles or waves of energy emitted by natural and man-made sources. LANSCE has several particle beam accelerating facilities that produce ionizing radiation. Ionizing radiation loses energy when it passes through a medium and interacts with constituent atoms and molecules. Biological effects of radiation are induced by the absorption of energy in tissues. Most of the radiation energy is absorbed in the water content of the body and may result in chemical changes. In high enough doses, radiation can cause wide-ranging effects. There are additional risks associated with prenatal radiation exposure.

- You are not expected to receive significant radiation exposure on this tour; however, if you wish, you may request a dosimeter which is designed to measure radiation dosage.

OR

- The dosimeter you have been issued is designed to record any measurable exposure you may receive while on site.

AND

- The TA-53 Radiation Protection pamphlet explaining potential radiological hazards in more detail is available upon request.

POSTINGS:

- Radiological areas are posted with entry and exit requirements.
- Follow guide's instructions for any specifics when entering or leaving these areas.

EMERGENCIES:

- Stay with tour group.
- Follow guide's instructions.
- Remain at muster area with your guide until you are released.

TA-53 RADIATION PROTECTION

• Policies and Responsibilities

Radiation is the collective term for the particles or waves of energy emitted by natural and man-made systems. Radiation can be ionizing radiation or nonionizing. Ionizing radiation is produced at TA-53 by several particle beam accelerating facilities. Ionizing radiation can cause chemical changes in the body. This brochure addresses radiation protection with regard to ionizing radiation. Examples of nonionizing radiation are microwaves and television waves.

Both the Laboratory and the Department of Energy work to keep radiation exposure as low as reasonably achievable (ALARA). The goal of ALARA is to keep exposure to ionizing radiation as low a level as is socially, technically, and economically practical.

Laboratory managers must ensure that radiation doses to employees, visitors, and the public are kept ALARA. Employees and visitors must obey posted signs and instructions in controlled and radiological areas; receive training appropriate to their job assignments; and inform supervisors of radiation hazards of potential problems.

• Radiation Dosimetry

If you are issued a dosimetry badge, you must wear it at all times when on site.

• Risks of Occupational Radiation Exposure

Risks from occupational radiation exposure depend on

- the amount of radiation received (radiation dose)
- the period of time over which the dose is received
- the area of the body that receives the dose.

Somatic Effects- These effects will take place in the body of the person who has been exposed. Ionizing radiation can change body cells, resulting in illnesses, including cancer. The risk of developing an illness is proportional to the amount of radiation dose received.

Genetic Effects- Effects may show up in the offspring of a person exposed to radiation doses.

• Risks of Prenatal Radiation Exposure

In high enough doses, radiation can cause effects that range from deformation of the fetus to an apparent increased susceptibility to certain diseases. The most radiosensitive periods are from 8 to 15 weeks, and to a lesser extent from 16 to 25 weeks of gestational age. Exposure of the fetus to large doses of radiation during this period of development can result in mental retardation, small headsize, and an increased risk of cancer.

• **Emergency Procedures**

Call 911

- Follow your host's instruction and stay with your host all times
- Emergency Evacuation Posters may be found throughout the Laboratory and will provide evacuation routes, assembly areas, and emergency phone numbers.

Alarms

- There are many different types of alarms used at TA-53. If you hear any alarm, immediately evacuate the building and go to the assembly area. Stay with your host and remain there until all people have been accounted for.

First Aid

- Visitors should report to the Los Alamos Medical Center for medical treatment.
- For Emergencies, call 911. In the event of a major medical emergency, call an ambulance by dialing 911 or go directly to Los Alamos Medical Center.

Fires

- Secure your safety first
- Call 911
- Report to the designated assembly area
- **Do not attempt to fight the fire**

• **Postings**

There are many types of postings that you may encounter at TA-53. Be sure to read all signs and follow all directions or precautions that must be taken before entering. These precautions are usually indicated on the lower portion of the sign:

- the dose rate or contamination level and
- required protective clothing, training or dosimetry

• **TA-53 Health Physics**

ESH-1 Section Office	7-5890
Radiological Control Technicians	7-7069
LANSCE Training Office	5-6256

• **Emergency - call 911**

Emergency Management Office	7-6211
Protective Force	7-4437